

United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate

Number SA87NW

This certificate, issued to Kenmore Air Harbor, Inc.

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 3 of the Civil Air Regulations, effective November 1, 1949, as amended by 3-1 through 3-12.

Original Product—Type Certificate Number: 3A12

Make: Cessna

Model: 172A through 172N (Landplane/Seaplane)
(Normal Category Only)

Description of Type Design Change:

Installation of Lycoming O-360-A1A, 180 Hp engine and Hartzell HC-C2YK-1A/7666A-0 propeller as indicated in Continuation Sheets 3 through 5. Data required:

(1) AVCON Industries, Inc., Drawing List 17213 (Models 172A through 172H) or A17213 (Models 172I through 172N) dated December 3, 1973. (2) Incorporation of Marvel-Schebler MA-4-5 carburetor, Part No. 10-3878M or 10-4164. (3) A copy of this Certificate, including Continuation Sheets is required. (4) Deletion of requirement for lower cowl lip as specified in AVCON Industries, Inc., Drawing 17213A dated March 25, 1971, as applicable to Models 172I through 172N only.

Limitations and Conditions:

Approval of this change in type design applies basically to the above model aircraft only. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined that the interrelationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft.

(SEE "CONTINUATION SHEETS" PAGES 3 - 5)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: August 8, 1973

Date reissued:

Date of issuance: January 9, 1974

Date amended: December 12, 1974; February 27, 1976; August 24, 1976; May 7, 1979

By direction of the Administrator

Charles C. Schroeder
(Signature)

Chief, Engineering and Manufacturing Branch
(Title)



Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate
(Continuation Sheet)

Amended May 7, 1979 *Number* SA87NW

Limitations and Conditions (continued):

This approval is also extended to the installation in the above models with Pee Kay Model 2300 seaplane floats in accordance with Pee Kay Float Division STC SA358NW and Edo Model 689-2130 seaplane floats (on Cessna 172L, M, and N models only) in accordance with Edo Drawing 689-1100. A copy of this Certificate and Addendum No. SA87NW shall be maintained as part of the permanent records for the modified aircraft.

SUPPLEMENTAL TYPE CERTIFICATE ADDENDUM NO. SA87NW

The conditions and limitations of Type Certificate Data Sheet Number 3A12 apply except where superseded by the following:

This Supplemental Type Certificate Data Sheet, which is part of the STC SA87NW, prescribes the conditions and limitations under which the product for which the STC was issued meets the airworthiness requirements of the Federal Aviation Regulations:

SUPPLEMENTAL TYPE CERTIFICATE HOLDER: Kenmore Air Harbor, Inc.

I. MODEL 172A THROUGH 172N 4PCL-SM (NORMAL CATEGORY) AS MODIFIED BY STC SA87NW

Engine:	Lycoming O-360-A1A
Fuel:	91/96 minimum grade aviation gasoline (unuseable fuel capacity unchanged)
Engine Limits:	For all operations 2700 rpm (180 Hp)
Propeller and Propeller Limits:	Hartzell HC-C2YK-1A/7666A-0 Diameter: Not over 76"; Not under 74" Placard: "AVOID CONTINUOUS OPERATION BETWEEN 2000 AND 2250 RPM" Pitch Settings: 11° Low; 29° High
Powerplant Instrument Markings:	Tachometer: 2700 rpm (red line) 2000 - 2250 rpm (red arc) Oil Temperature: 245° F (red line)

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Powerplant Instrument
Markings (continued):

Oil Pressure:
25 psi minimum (red line)
100 psi maximum (red line)
60 to 90 psi normal (green arc)
Fuel Pressure:
15 psi minimum (red line)
8 psi maximum (red line)
3 to 5 psi normal (green arc)

C. G. Range:
(NORMAL CATEGORY)

Seaplane (Edo 89-2000 or 89A-2000 floats):
(+39.8) to (+45.5) at 2220 pounds
(+36.4) to (+45.5) at 1825 pounds or less
Seaplane (Edo 689-2130 floats) Cessna 172L, M, N:
(+40.9) to (+45.5) at 2350 pounds
(+36.4) to (+45.5) at 1825 pounds or less
Seaplane (Pee Kay 2300 floats) Models 172A, B, C:
(+40.0) to (+45.5) at 2250 pounds
(+36.4) to (+45.5) at 1825 pounds or less
Seaplane (Pee Kay 2300 floats) Models 172D thru N:
(+40.5) to (+45.5) at 2300 pounds
(+36.4) to (+45.5) at 1825 pounds or less

Landplane:

See Certificate Data Sheet 3A12

STRAIGHT LINE VARIATION BETWEEN POINTS GIVEN

Maximum Weight:

Normal Category:

Edo Seaplane 2220 pounds
Edo Seaplane 2350 pounds (Models 172L, 172M, 172N)
Pee Kay Seaplane 2250 pounds (Models 172A thru C)
Pee Kay Seaplane 2300 pounds (Models 172D thru N)

Serial Numbers
Eligible:

See Type Certificate Data Sheet 3A12

United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate
(Continuation Sheet)

Amended May 7, 1979 *Number* SA87NW

DATA PERTINENT TO ALL MODELS

Certification Basis: Same as specified in Type Certificate Data Sheet No. 3A12

Production Basis: NONE. Prior to returning to service, conformity to approved data must be determined for components not identified by Form 8130.3, Parts Manufacturer Approval, or other evidence of FAA Production Approval.

NOTE 1. Current weight and balance report, together with list of equipment included in certificated empty weight and loading instructions, when necessary, must be provided for each aircraft at the time of modification.

NOTE 2. The following placards must be displayed as indicated:

- (1) Adjacent to or in close proximity to the aircraft identification plate:

KENMORE AIR HARBOR
Kenmore, Washington
Lycoming O-360-A1A
Engine Installation
STC SA87NW, Date Installed

- (2) Above the Fuel Pump Switch: Fuel Pump - Pull ON

- (3) On the Dome Light Fuse Placard: Fuel Pump

- (4) On Nav Light Fuse Placard: Nav and Starter

- (5) In Close Proximity to the Tachometer:

AVOID CONTINUOUS OPERATION
BETWEEN 2000 AND 2250 RPM

NOTE 3. With the described engine and propeller installation, performance will be at least equal to or better than that given in the original FAA Approved Flight Manual for the Cessna 172 series airplanes.

- END -

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